



Congressional Budget Office

Testimony

**Statement of
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The Value of 30-Year Defense Procurement Plans for Congressional Oversight and Decisionmaking

**before the
Subcommittee on Oversight and Investigations
Committee on Armed Services
U.S. House of Representatives**

June 1, 2011

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Mr. Chairman, Representative Cooper, Members of the Subcommittee, I want to thank you for giving me the opportunity to discuss with you the value of the Department of Defense's (DoD's) annual 30-year shipbuilding and aviation plans in the Congress's funding decisions for and oversight of the department's activities.

Every year, the Congress is asked to approve the procurement of one year's worth of expensive items such as ships and aircraft. Yet those decisions have long-term implications. Well-constructed 30-year acquisition plans for major weapon systems can provide information about those implications. I will discuss the role that those plans by DoD can play in Congressional oversight and decisions about funding, the inevitable uncertainty surrounding such plans, and a few suggestions for how the plans might be improved.

The Role of DoD's 30-Year Ship and Aircraft Plans in Congressional Oversight and Decisionmaking

The 30-year ship and aircraft plans benefit Congressional oversight and decisions about funding in at least three different ways:

- Thirty-year plans may reveal cumulative long-term effects of annual appropriation decisions that may not be apparent from a shorter perspective.
- Such plans may also reveal imbalances between long-term objectives for inventories and projected budgetary resources.
- The plans provide information on DoD's assumptions about the service lives of major weapons systems and how those assumptions may affect its inventory goals.

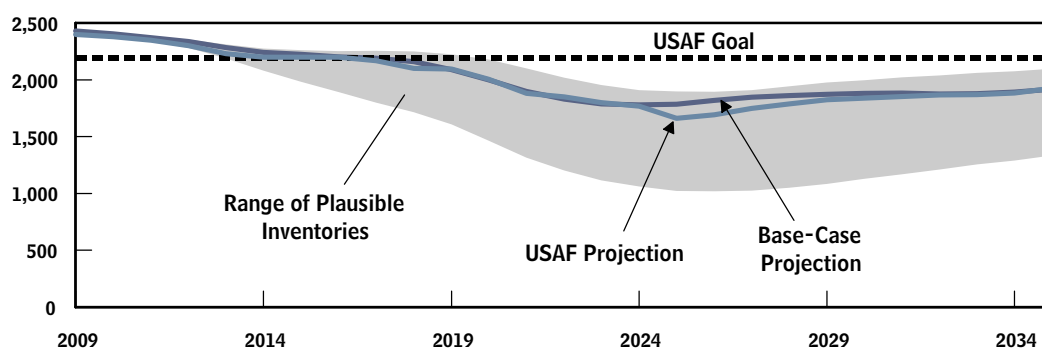
The Effects of Annual Appropriation Decisions over the Long Term

DoD's 30-year shipbuilding and aviation plans enable the Congress to assess the long-term effects of the incremental decisions that are made each year in the annual authorization and appropriation process. Ships and aircraft take decades to develop and procure, and those ships and aircraft often remain in the inventory for decades more. In the absence of a 30-year plan, the cumulative effects of those annual decisions may not be well understood. For example, during the 1990s, well before the Congress instituted the requirement for a 30-year shipbuilding plan, attack submarines were bought at an average rate of about half a submarine a year. At the time, that historically low rate did not affect the ability of the Navy to meet its inventory goal because the Navy had more than enough submarines to meet that goal for years to come. However, once the Navy begins to retire three or four submarines per year in the latter part of the 2010s, it will not be able to meet its inventory goal in the 2020s and 2030s without purchasing large numbers of submarines within a short period of time in an environment of constrained budgets. Although the existence of a 30-year plan in the 1990s might not have changed the amounts that the Congress appropriated for submarines, it would have provided more information about the long-term

Figure 1.

Potential Air Force Fighter Inventories Under a Range of Projections

(Total aircraft inventory)



Source: Congressional Budget Office based on the Department of Defense's fiscal year 2009 plan. Published originally in Congressional Budget Office, *Alternatives for Modernizing U.S. Fighter Forces* (May 2009).

Notes: JSF = Joint Strike Fighter; USAF = United States Air Force.

Base-Case Projection:

- The A-10 and F-15 reach 16,000 and 12,000 flight hours, respectively
- Production and fielding of the F-35A JSF remain on schedule
- Average annual flight hours accrued per aircraft equal those of the past 10 years

Optimistic Case (Upper edge of shaded region):

- The A-10 and F-15 reach 16,000 and 12,000 flight hours, respectively
- Production and fielding of the F-35A remain on schedule
- Average annual flight hours accrued per aircraft are reduced by 10 percent (relative to the average of the past 10 years)

Pessimistic Case (Lower edge of shaded region):

- The A-10 and F-15 reach 12,000 and 8,000 flight hours, respectively
- Production of the F-35A slips by two years and peak production is reduced from 80 aircraft per year to 64
- Average annual flight hours accrued per aircraft equal those of the past 10 years

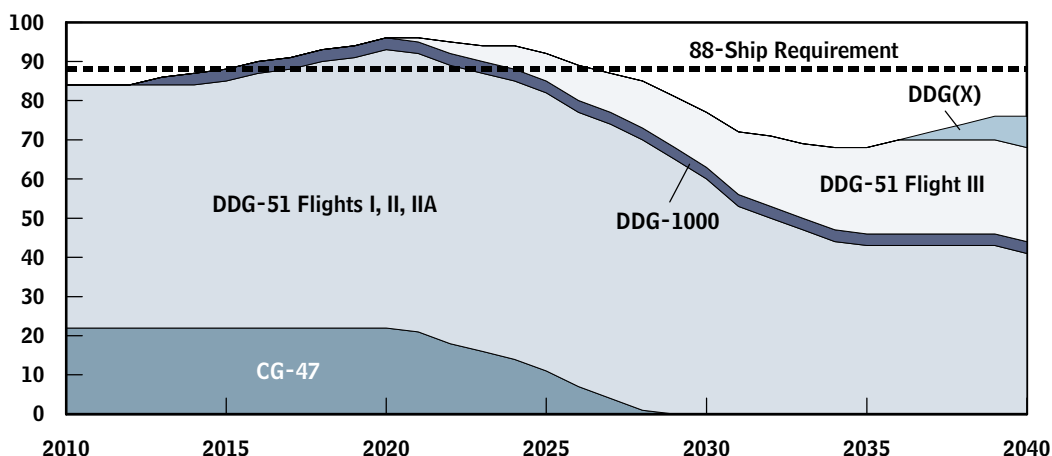
consequences of those appropriation decisions. A 10-year plan would not have illuminated those longer-term challenges.

Recent CBO reports provide examples of the value of examining procurement quantities and inventories of ships and aircraft over a 30-year period. In one report, using information contained in the 30-year projections, CBO showed that, under its base case assumptions and DoD's 2009 plan, the Air Force's inventory of fighters would fall short of its current requirements by more than 400 aircraft in 2025 (see Figure 1).¹ In another report, CBO concluded that, under the Navy's 2011

1. See Congressional Budget Office, *Alternatives for Modernizing U.S. Fighter Forces* (May 2009).

Figure 2.

Inventories Versus Requirements for Large Surface Combatants Under the Navy's 2011 Plan



Source: Published originally in Congressional Budget Office, *An Analysis of the Navy's Fiscal Year 2011 Shipbuilding Plan* (May 2010).

Note: DDG = guided missile destroyer; CG = guided missile cruiser.

shipbuilding plan, inventories of surface combatants would fall below the service's goal in the 2030s (see Figure 2).² In light of the long lead times needed to fill those gaps, measures to address the shortfalls could require action by the Congress long before the shortfalls become a reality.

Matching Inventory Goals and Resources

Another important function of the 30-year plans is that they may reveal whether an imbalance exists between the inventory goals for ships or aircraft and the resources the military services are projected to receive. If such an imbalance was indicated, the Congress might want to more closely review the defense strategy that was the basis for DoD's inventory goals, the amount of money the department would receive, or how those resources would be spent. Specifically, if an imbalance between programs and resources were highlighted by the 30-year plans, the Congress might decide to reallocate resources from other programs to purchase ships or aircraft, take steps to reduce the costs of the desired ships or aircraft, or fund a different mix or different types of ships and aircraft within current resource levels. For example, the Navy's 2011 shipbuilding plan revealed that the service would face a substantial budgetary challenge in the 2020s and early 2030s, when it expects to purchase 12 SSBN(X) submarines—replacing the Ohio class ballistic missile submarines—generally at a rate of one per year and still pay for other planned purchases of ships. Over the past year, the prospect of that budgetary challenge has led the Congress and the Navy to focus more

2. See Congressional Budget Office, *An Analysis of the Navy's 2011 Shipbuilding Plan* (May 2010).

attention on the early design efforts for the SSBN(X) in order to reduce the procurement costs for those ships.

The recent history of several of the Navy's 30-year shipbuilding reports serves as a useful illustration of the value of such reporting in supporting the Congress's oversight functions. After the Navy conducted its force structure assessment in 2005 and reported the results of that analysis in its 2007 30-year shipbuilding plan, published in February 2006, the service established a goal of 313 ships—some 30 ships more than existed at that time—and outlined both a procurement strategy and budgetary strategy to achieve that goal. The report stated that the budgetary strategy was based on four key assumptions about how spending growth in the Navy's various budget accounts could be restrained. The Navy took the same budgetary approach in its fiscal year 2008 shipbuilding plan. However, CBO observed the following year that the 2009 budget was already departing from the assumptions the Navy had made in constructing its 2007 and 2008 shipbuilding plans.³

Abandoning the budgetary strategy used for the 2007 and 2008 plans, the Navy's 2009 30-year plan described its intention to buy most of the ships the service said it needed to meet its inventory goals, but both the Navy and CBO estimated that the plan would cost about twice the amount the Navy had historically spent on shipbuilding.

The Navy did not present a 30-year shipbuilding plan for 2010, but in its 2011 report, the Navy presented a shipbuilding plan that the service felt was achievable within the amount of funding that it would probably be provided. However, CBO's analysis of the plan showed that it would still require substantially more funding than the Navy had been receiving historically and that the procurement schedule under the plan would not be sufficient to meet all of the Navy's inventory objectives.⁴

In short, those year-to-year changes in the Navy's annual 30-year reports on shipbuilding illuminated the challenge of developing a shipbuilding program that satisfies the dual objectives of meeting its inventory goals and being affordable at funding levels consistent with recent historical experience. On the basis of such information about the procurement plans of the Navy and the other services, the Congress may want review or suggest changes in defense strategy, change how much money is appropriated for DoD's activities, or change how that money is allocated to various priorities within the department.

Information About Inventory Goals and Service Lives

The 30-year plans also provide the Congress with information about the relationship between DoD's long-term objectives for its inventories and the department's assump-

3. See Congressional Budget Office, "Resource Implications of the Navy's Fiscal Year 2009 Shipbuilding Plan," attachment to a letter to the Honorable Gene Taylor (June 9, 2008), pp. 10–11.

4. See Congressional Budget Office, *An Analysis of the Navy's 2011 Shipbuilding Plan* (May 2010).

tions about the service lives of ships and aircraft. For example, several of the Navy's 30-year shipbuilding plans include an assumption that certain existing and future classes of large surface combatants (cruisers and destroyers) will serve in the fleet for 40 years. Historical experience since 1970 indicates that the Navy has generally retired its surface combatants before the average age of the class reached 30 years.⁵ The 30-year plans make the assumptions about service life more transparent so that the Congress has the opportunity to examine whether those assumptions are realistic and to judge whether it is investing sufficient resources in maintaining existing surface combatants to ensure that they can serve in the fleet for 40 years. If not, the Congress may consider providing additional resources to either better maintain and improve existing ships or to purchase more ships in order to meet the Navy's inventory goals.

Uncertainties in 30-Year Procurement Plans

There is, of course, considerable uncertainty in any 30-year ship or aircraft procurement plan. The Navy's 2011 plan highlighted some of the difficulties in both developing such a plan and estimating its costs, particularly for ships to be purchased in the third decade of that time span. Specifically, the report stated, "The requirements during this period are not as well defined as those for the near or mid-term. The number, types and capabilities of ships are estimated based on anticipated Joint and Navy war-fighting requirements, and cost estimates are notional due to the uncertainty of business conditions affecting the shipbuilding industry. In this report, the far-term phase largely addresses the recapitalization of today's legacy ships." The Navy added that the shipbuilding profile of the third decade is "certain to change over the next two decades."⁶

Although such uncertainties limit the utility of 30-year plans as predictive tools, the documents can nevertheless help inform the Congress of changes in plans and circumstances that are likely to arise. Such information can be particularly important in the case of military aircraft. Given the rapid pace of technological innovation in the aerospace industry (particularly in the case of unmanned aircraft), long-term aviation plans are likely to be even more fluid than those for Navy ships. Indeed, citing long-term uncertainties in requirements and technology, DoD's first two 30-year aviation plans—submitted to the Congress with the fiscal year 2011 and 2012 budget requests—included only 10 years of programmatic detail. Nevertheless, the Congress is frequently faced with events and decisions about military aircraft inventories and acquisition budgets for which the major implications may not be felt until after

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5. In some cases, classes of ships were retired because the ships were in poor condition and the Navy did not consider it cost-effective to spend resources to fix the problems or because the Navy no longer considered the ships to be effective in a maritime conflict. In other cases, the Navy was reducing the size of its surface combatant force and no longer needed the ships in its inventory.
 6. Department of the Navy, *Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2011* (February 2010), www.militarytimes.com/static/projects/pages/2011shipbuilding.pdf.

10 years. Recent occasions include the structural failure of an F-15 Eagle that could have portended the need to retire those fighters many years earlier than expected; delays in the development of the F-35 Joint Strike Fighter that will probably compel the services to retain older aircraft longer than planned; and the decision to begin developing a new long-range bomber that will require substantial funding in years well beyond the span of DoD's five-year plan provided in the Future Years Defense Program.

Although future military and technological developments are difficult to predict, long-term plans are useful in understanding the implications of individual events and decisions such as these in the context of the entire aircraft force (or ship fleet) and the funding that may be needed to support it. In much the same way that CBO's budget baseline provides a reference trajectory for federal spending under current law, a well-documented 30-year aviation or shipbuilding plan can provide a picture of how forces may evolve over time and what investments will be needed if current plans and assumptions remain unchanged. The value of that picture lies not in its accuracy as a blueprint of the future but rather in its utility as a basis for the Congress to evaluate the long-term implications of changes to today's plans and circumstances—changes that will inevitably arise.

A recent CBO projection of Air Force fighter inventories illustrates that utility. Starting from a projection of fighter inventories based on a particular set of plans and assumptions, the analysis examines the implications that potential real-world circumstances—such as a reduction in the expected service lives of in-service aircraft or delays in the development of replacement aircraft—might have on the size of the fighter force (see Figure 1 on page 2). In general, such an understanding can help inform Congressional actions that might be needed to respond to such circumstances.

Improving the Content of the 30-Year Procurement Plans

The Congress's oversight of the Navy's shipbuilding programs could be improved if the Navy included in its reports and the accompanying tables a listing by class of the types of ships that would be procured, delivered, retired, and serving in the fleet each year over the 30-year span. Currently, the Navy's plans simply group the ships together in major categories: aircraft carriers, large surface combatants, small surface combatants, attack submarines, ballistic missile submarines, amphibious ships, combat logistics ships, and support ships. Oversight could also be improved if the Congress required the Navy to deliver to the defense oversight committees and the Congressional support agencies supplementary tables on ship procurement, delivery, retirement, and cost at the same time the official report is submitted to the Congress. In the past, those tables have usually been provided informally, sometimes within days, but other times not for months, after the report was delivered.

Similarly, long-term aircraft acquisition plans would be more informative if they displayed the expected inventory of each type of aircraft over the span covered—to include the schedule over which existing aircraft were expected to be phased out of the

force and replacements phased in—as well as the underlying assumptions (for example, the years of service expected from each type of aircraft). Knowing the underlying assumptions would make possible analyses of the potential implications of changes to them.

Although DoD has not produced 30-year plans for ground combat vehicles (tanks and other armored vehicles), rotary and fixed wing aircraft, and trucks, such plans would also be useful for oversight of the Army's and Marine Corps' acquisition plans, particularly if they provided information about the size and age of current inventories, inventory goals, and plans to replace or modernize vehicle and aircraft fleets and the costs of doing so. Although a ground combat vehicle or truck costs significantly less than a ship or aircraft, the Army buys tens of thousands of them spread over many years, which makes them a large component of the Army's acquisition budget and would make a 30-year plan useful for oversight.

Of course, the level of detail in a 30-year acquisition plan must be tempered by the effort and cost to produce it. Developing and estimating the costs of DoD's 30-year ship and aircraft plans requires an investment of time, effort, and money that CBO has not analyzed. However, the cost of preparing such a plan is not large in comparison with the cost and importance of the weapon systems involved. Preparing some portions of a long-term plan—for example, projecting the service lives of ships currently in service—is likely to be less burdensome than others—for example, projecting the cost of a bomber that will not be fielded until the mid-2020s. However, rough estimates for systems far in the future might be adequate given the obvious uncertainty in long-term projections. I and other CBO analysts would welcome the opportunity to work with the Committee staff and representatives of DoD to discuss future 30-year plans in order to enhance their usefulness to the Congress.

